

Serial No.: 09/183,715

Filing Date: October 30, 1998

Attorney Docket No. 100.104US01

Title: USING ALTERNATE POLARIZATION IN FIXED WIRELESS SYSTEM DEPLOYMENT FOR IMPROVED CAPACITY

sub B3 cont
A7 communicating using a second polarization in a second portion of each communication area; and wherein adjacent portions of communication areas between different communication circuits use the same polarization.

NEW CLAIMSPlease add the following additional new claims.

40. (New) A method comprising:

A3 forming a number of communication areas, each communication area including a communication circuit, each communication circuit communicating using a first polarization in a first portion of each communication area and a second polarization in a second portion of each communication area;

sub B5 forming a number of communication regions of either the first or second polarization wherein adjacent portions of communication areas between different communication circuits use the same polarization; and

forming a number of sectors within each communication area, where the first and second portions of the communication area are divided along a number of boundaries of the sectors, each sector communicating on a different subband of a frequency spectrum.

41. (New) The method of claim 40 wherein the first polarization comprises horizontal polarization.

54B
C1 42. (New) The method of claim 41 wherein the second polarization comprises vertical polarization.

43. (New) The method of claim 40 wherein each sector subband is different than the subband being communicated on by an adjacent sector.

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44. (New) The method of claim 40 wherein the communicating consists of transmitting.

45. (New) The method of claim 40 wherein the communicating consists of receiving.

46. (New) A communication system comprising:

a number of communication circuits disposed to divide a region into communication areas;

wherein each communication circuit communicates using a first polarization in a first portion of its communication area and communicates using a second, different polarization in a second portion of its communication area; and

wherein adjacent portions of communication areas between each pair of adjacent communication circuits use the same polarization.

47. (New) The communication system of claim 46 wherein the first polarization comprises horizontal polarization.

48. (New) The communication system of claim 47 wherein the second polarization comprises vertical polarization.

49. (New) The communication system of claim 46 wherein the first and second portion of each communication area comprises approximately one half of the communication area.

50. (New) The communication system of claim 46 further comprising a number of sectors within each communication area, each sector communicating on a subband of a frequency spectrum.

51. (New) The communication system of claim 50 wherein each sector communicates on a different subband than the subband being communicated on by an adjacent sector.

AMENDMENT AND RESPONSE

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52. (New) The communication system of claim 50 wherein the first and second portions of the communication area are divided along a number of boundaries of the sectors.

53. (New) The communication system of claim 46 wherein each communication circuit transmits signals using a first and second polarization.

54. (New) The communication system of claim 46 wherein each communication circuit receives signals using a first and second polarization.
